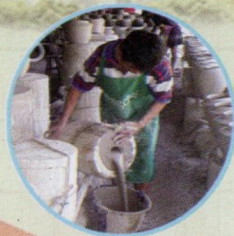




กรมส่งเสริมอุตสาหกรรม
DEPARTMENT OF INDUSTRIAL PROMOTION

ศูนย์พัฒนาอุตสาหกรรมเซรามิก CERAMIC INDUSTRIES DEVELOPMENT CENTER กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม



ติดต่อเรา :

<http://ceramiccenter.dip.go.th> E-mail : ceramic@dip.go.th

T : 0 5428 1884, 0 5428 2376 F : 0 5428 1885

424 Moo 2 Paholyothin Road, Tambon Sala, Aumthur Kokha,
Lampang 52130 THAILAND.

424 หมู่ 2 ถนนพหลโยธิน ตำบลศาลา อำเภอกะเคา จังหวัดลำปาง 52130

กระบวนการทำแม่พิมพ์ Flowchart for mould making



ออกแบบ - ทำต้นแบบและทำแม่พิมพ์
Design - Model Making



ทำเคสโมลด์
Case mould making



ปูนปลาสเตอร์
Gypsum plaster



ชั่งน้ำหนัก
Weighing balance



เครื่องผสมปูนแบบสุญญากาศ
Vacuum agitator



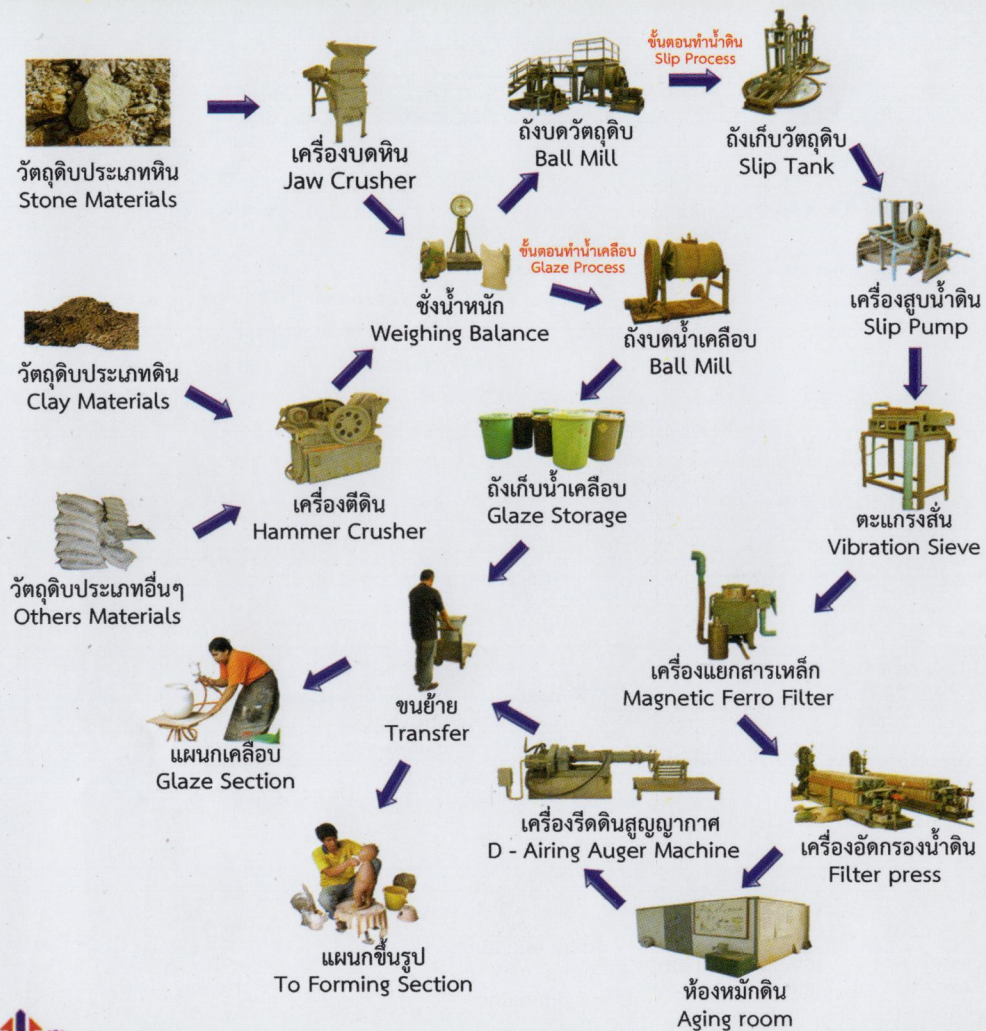
ผลิตแม่พิมพ์ใช้งาน
Working Mould Making



ส่งไปแผนกขึ้นรูป
To forming section



กระบวนการเตรียมน้ำดินและเคลือบ Flowchart for body and glaze preparation



ศูนย์พัฒนาอุตสาหกรรมเซรามิก กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

กระบวนการขึ้นรูป Flowchart for forming section

การขึ้นรูปด้วยเครื่องโรลเลอร์เฮด Forming by Roller Head Machine



การขึ้นรูปด้วยการหล่อหน้าดิน Forming by Slip casting



การขึ้นรูปด้วยแป้นหมุน Forming by Potter's Wheel



การขึ้นรูปด้วยเครื่องจิกเกอร์ Forming by Jigger

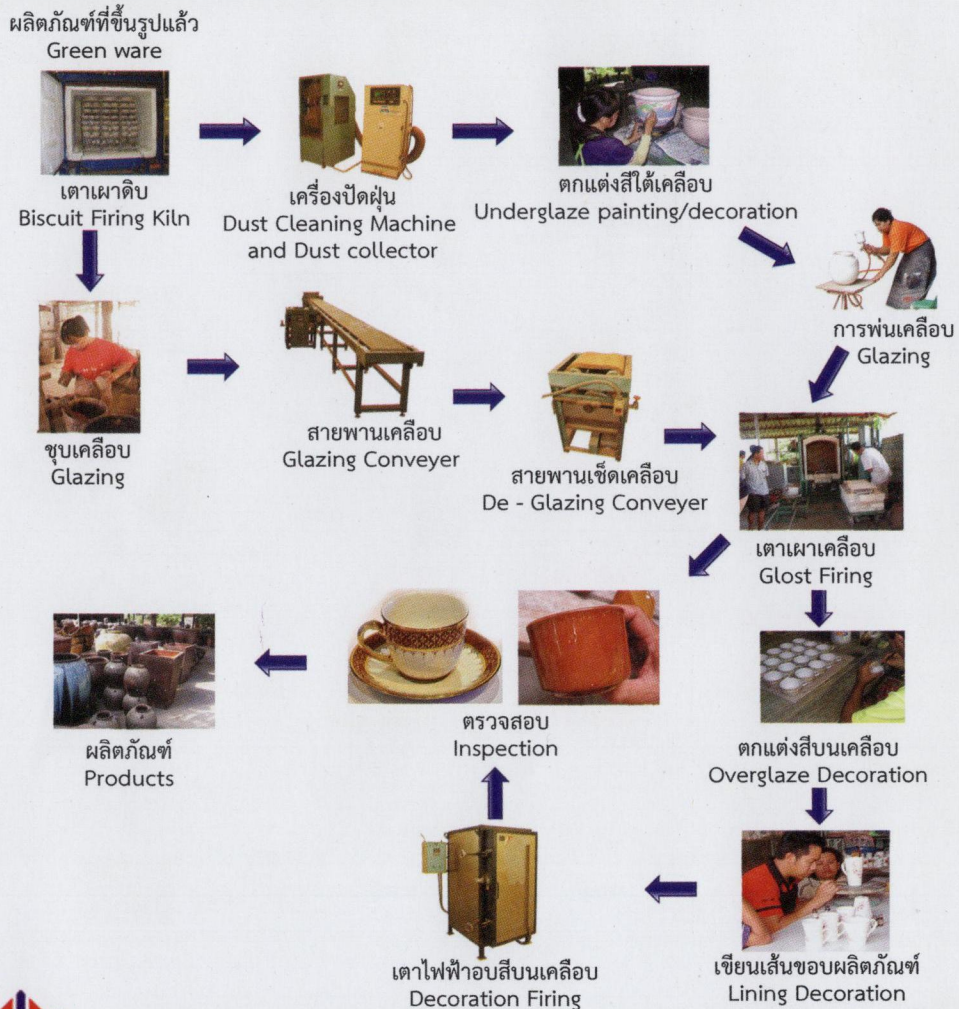


การขึ้นรูปด้วยเครื่องแรมเพรส Mechanical Forming by Rampress



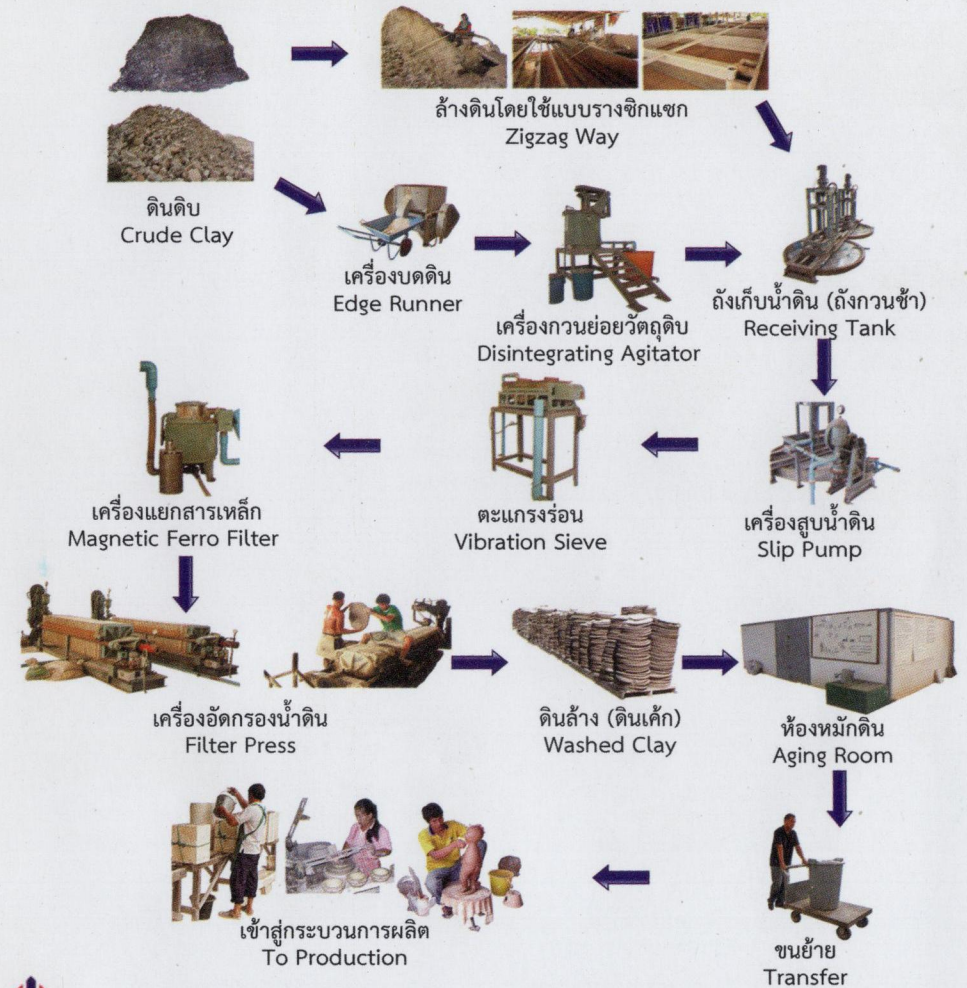
ศูนย์พัฒนาอุตสาหกรรมเซรามิก กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

กระบวนการเผาและตกแต่ง Flowchart for firing and decoration



ศูนย์พัฒนาอุตสาหกรรมเซรามิก กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

กระบวนการล้างดิน Flowchart for clay dressing



ศูนย์พัฒนาอุตสาหกรรมเซรามิก กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

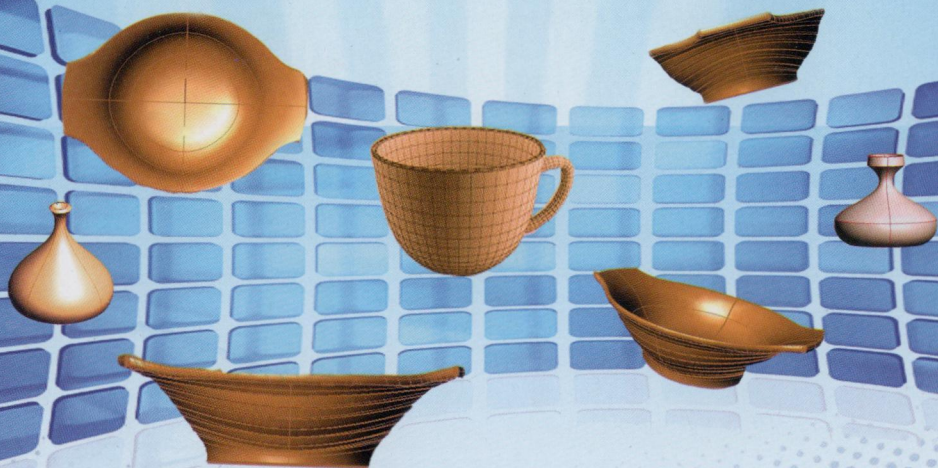


กรมส่งเสริมอุตสาหกรรม
DEPARTMENT OF INDUSTRIAL PROMOTION

ศูนย์พัฒนาอุตสาหกรรมเซรามิก

CERAMIC INDUSTRIES DEVELOPMENT CENTER

กรมส่งเสริมอุตสาหกรรม กระทรวงอุตสาหกรรม



Ceramic Industries Development Center

Background

Ceramics Industries Development Center, Department of Industrial Promotion, Ministry of Industry is the government agency which was established in accordance with the cabinet's agreement on 13th of May 1989 as a unit under Industrial Promotion Center Region 1, Chiangmai province. In 1995 become Ceramic Development Center, Bureau of Industrial Sectors Development, Department of Industrial Promotion, Ministry of Industry and then in 2008 under the reorganization of the DIP become Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry. Additionally, in 1992-1997, the Japanese government through the Japan International Cooperation Agency (JICA) granted to allocate machines, equipments, experts and study & training fellowship for its staff.

Vision:

To be the leading organization for promoting and development of ceramic industries in Thailand

Missions

To encourage the development of ceramic industries, entrepreneurs, communities, as well as business service providers to raise their efficiency and competitiveness with value-based innovation, knowledge, wisdom and good governance.

Activities

- ❖ Providing technological consultancy services
- ❖ Improvement product designs
- ❖ Testing facility for raw materials and products by ISO/IEC 17025 accredited Laboratory
- ❖ Information service such as ceramic directory, ceramic library includes text, journal and body and glaze formula
- ❖ Promoting R & D activities includes traditional ceramics and new ceramics
- ❖ Conducting technical training courses and technology transfer
- ❖ Tools and machines for ceramic processing
- ❖ Supporting ceramics cluster formation in order to enhance productivity and competitiveness
- ❖ Holding entrepreneurship development in general administration
- ❖ Supporting and developing pottery community industry in production and general administration
- ❖ Management the Lampang Ceramic and Handicraft Wholesale and Exhibition Center

Facilities

- ❖ Function rooms and dormitory



Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

Testing and machine services

No.	Type of Ceramic Testing	Detail of Ceramic Testing
1.	Chemical analysis by X-Ray Fluorescence Spectrometer	Percentage of Al_2O_3 , SiO_2 , Fe_2O_3 , MgO , K_2O , Na_2O , MnO_2 , TiO_2 , CaO and LOI (Loss on Ignition)
2.	Mineralogical analysis by X-Ray Diffractometer	Qualitative analysis of mineralogical composition
3.	Lead and Cadmium analysis by Atomic Absorption Spectrometry (AAS)	Quantity of Lead and Cadmium dissolved in tableware, cooking ware and glassware
4.	Differential Thermal Analysis (DTA / TG)	Graph shows a change of raw material within 20-1200 °C
5.	Coefficient of Thermal Expansion analysis of clay by dilatometer	Coefficient of thermal expansion of ceramic clay
6.	Particle Size Analysis by Laser Particle Size Analyzer	Particle Size Analysis
7*	Physical testing 1000-1200°C	Percentage of Shrinkage Percentage of Water Absorption
8.	Physical testing 1000-1250°C	Percentage of Shrinkage Percentage of Water Absorption Percentage of Porosity Specific Gravity Density (g/cm^3)
9*	Crazing testing	Crazing Testing on ceramic ware Diameter < 25 cm. height 25 cm. Diameter < 17 cm. height 14 cm.
10.	Bending strength of raw material and glaze by Bending strength tester - Green Strength - Fired Strength	Strength of ceramic raw materials (Kg/cm^2)
11.	Humidity testing	Humidity of raw materials
12.	Residue on sieve	Percentage of residue on sieve
13.	Color comparison by standard soil color charts	Color comparison
14.	Whiteness testing by colorimeter	Percentage of whiteness
15.	Fusion rate	Percentage of fusion
16.	Gradient Kiln	Maximum temperature 1300 °C
17.	Tool and machines services such as ball mill, de-airing extruder, filter press, rampress, roller machine etc.	-

* ISO/IEC 17025:2005 Accredited scope of testing, Testing No. 0232

For more information please contact BOC room ,main building during office hour 8.30am – 4.30pm.

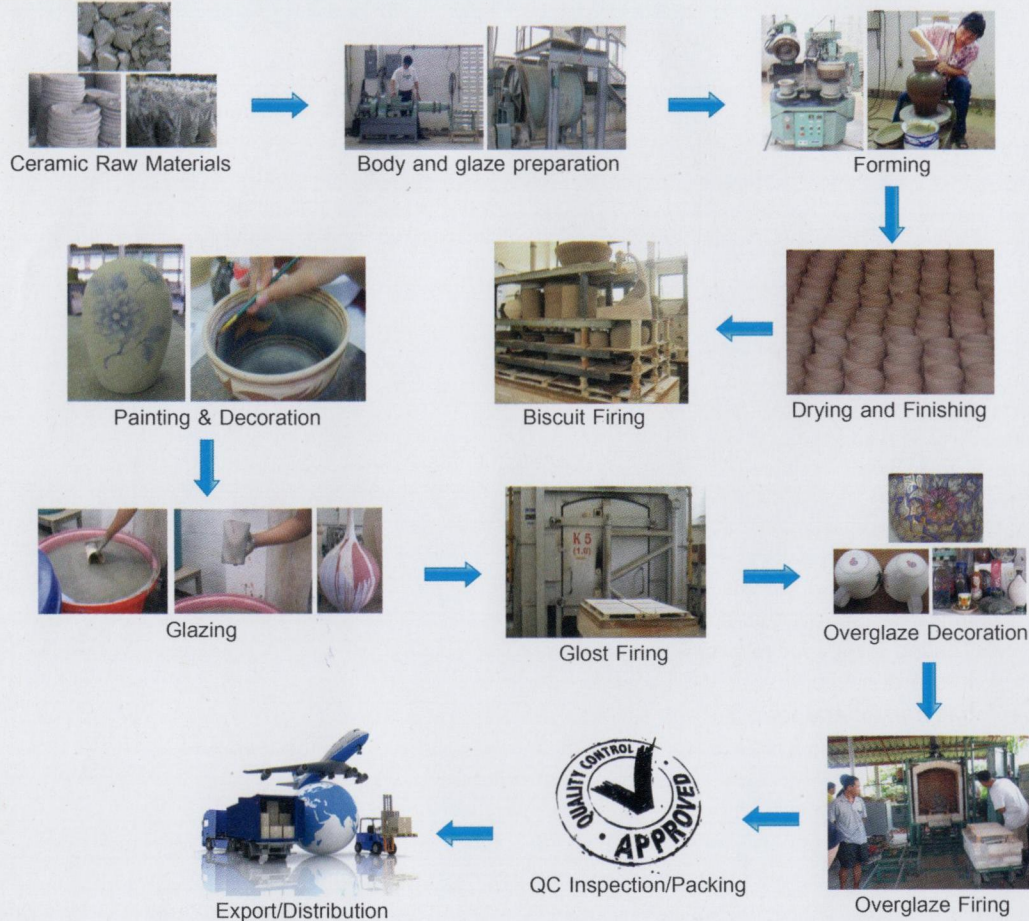


Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry



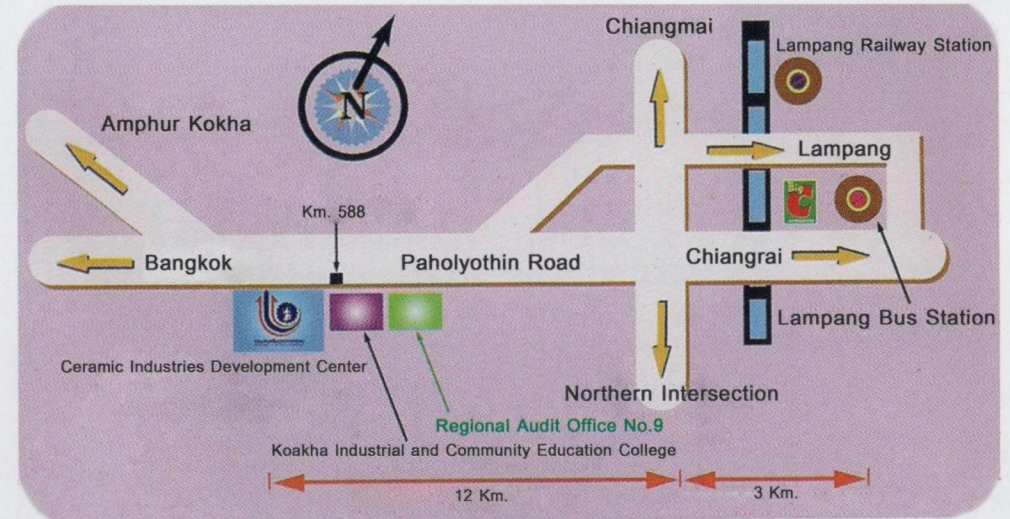
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

Ceramic Processing Flowchart



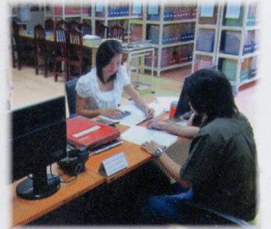
Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry

Map of Ceramic Industries Development Center



Contact address:

Ceramic Industries Development Center
 424 Moo 2 Paholyothin road, Tambon Sala,
 Amphur Kokha, Lampang 52130 Thailand
T : 0 5428 1884, 0 5428 2376 F : 0 5428 1885
Website : <http://ceramiccenter.dip.go.th>
E-mail : ceramic@dip.go.th



Ceramic Industries Development Center, Department of Industrial Promotion, Ministry of Industry